INTRODUCTION: Acute pancreatitis is the most common GI cause of U.S. hospital admissions, and the incidence is rising.1,2 Aggressive IV fluid resuscitation and pain control are the mainstay of therapy; with the therapeutic goal to resume diet as soon as safely possible, especially within the first 48–72 hours.3–5 Several studies and guidelines have suggested LR may provide anti-inflammatory benefits as measured by CRP and MPSS thresholds.6–8 Despite an improvement in MPSS criteria, studies have shown no mortality benefit.9 The primary goal of this study was to compare NS vs LR with improved clinical response as the primary endpoint. Clinical response was measured by time to diet initiation upon ED presentation. Secondary goals examined if the timing to initiation of IV fluids led to improved clinical outcome regardless of fluid type, as this has been examined in previous studies.

METHODS: Data was abstracted for all adult patients 18 years of age or older with an admitting diagnosis of acute pancreatitis from 1/17/17–12/31/17. Primary fluid type was determined by reviewing medication and IV infusion orders and was calculated by length of time for which the fluid was administered. A subgroup analysis was performed comparing patients within groups based on their MPSS score (0–1, 2, >3). Time to initiation of diet was examined by calculating the difference from time of arrival to the ED to the time that diet was ordered. For the secondary endpoint, patients were compared based on timing of initial fluid administration (<2 hours from arrival versus >4 hours from arrival). To determine if there was a significant difference when comparing time to diet initiation, a student’s t-test was utilized.

RESULTS: Complete data was collected on 200 patients. NS was the primary fluid type in 77% and LR for 21.5%. Time to diet initiation was shorter for patients receiving NS in all subgroups. This finding was significant in patients with a MPSS score of 1 or below (Table 2). The data indicates that when fluids were initiated within two hours as compared to greater than four hours, diet was initiated 7.4 hours sooner (Table 3). Diet initiation was delayed in patients with a MPSS of 3 or greater in both the NS and LR group.

CONCLUSION: Our study did not demonstrate any clinical difference in disease and symptomatic resolution based on fluid type. Time to fluid initiation may be more important than fluid choice. This should be studied further with larger populations.

RESULTS: A total of 91 patients were enrolled in the study. The mean age was 53.1 ± 12.7 years, 62% were men, and 65% had toxic etiology. Three distinct pain modulatory phenotypes were found: group 1 (n = 31) had normal pain modulation; group 2 (n = 17) had segmental sensitization; group 3 (n = 43) had widespread sensitization. Patients with widespread sensitization had higher pain score (P < 0.001) and lower QOL (P < 0.05) in comparison to segmental and normal. In contrast, psychological features were comparable across subgroups.

CONCLUSION: CP patients with widespread sensitization have significantly higher levels of pain and lower QOL. QST characterizes the sensory profiles independently of the patient’s psychological status and provides an unbiased proxy of pain processing. This information can be used for prognostication and tailoring of management strategies.

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Califications and Moderate to Marked Ductal Changes Are Only Seen in Patients With Imaging Documented Acute Recurrent Pancreatitis

INTRODUCTION: Acute recurrent pancreatitis (ARP) is often diagnosed on the basis of abdominal pain and elevations in pancreatic enzymes without abdominal imaging. However, neither pain nor enzyme elevations are specific for ARP and recurrent presentations without confirmatory imaging may lead to a misdiagnosis of acute recurrent pancreatitis (ARP) and/or chronic pancreatitis (CP).

METHODS: Adult patients with a diagnosis of ARP and/or CP between 2010–2019 were evaluated. All medical records and imaging studies from prior AP admissions were reviewed at our institution. Definite ARP was defined as ≥2 episodes of abdominal pain, elevated serum amylase and/or lipase ≤3X upper limit normal and abdominal imaging(s) showing changes or sequelae of AP. Probable ARP was defined as above but without any evidence of AP on abdominal imaging. Possible ARP was defined as ≥2 episodes of abdominal pain either with serum amylase and/or lipase levels that were normal or <3X ULN without any abdominal imaging showing AP. This was included as a category referring physicians had diagnosed and managed these patients as ARP. The M-ANNHEIM criteria were used to define definite CP. Any patients with definite CP without a history of ARP were excluded.

RESULTS: There were a total of 854 patients with ARP and/or CP with a mean age of 51.2 ± 14 years, 54.8% female, 75% white. There were 489 (57.2%) definite ARP, 162 (19%) probable ARP and 202 (23.7%) possible ARP with a similar mean duration of disease of 8.5 ± 7.8, 5.2 ± 4.1 and 6.8 ± 3.4 years, respectively. All patients were followed for a mean of 53.3 ± 2 years. Pancreatic calcification(s) and marked to moderate ductal changes were only seen in definite ARP. There were higher rates of socioeconomic insufficiency in definite ARP compared to probable and possible ARP (P = 0.005). Chronic opioid use was higher among the probable ARP compared to definite ARP and possible ARP (P < 0.001). All other characteristics including demographics, rates of alcohol use and smoking, diabetes and BMI similar between the 3 groups.

CONCLUSION: Recurrent presentations of abdominal pain and pancreatic enzyme elevations without confirmatory changes of AP on imaging is problematic for the diagnosis of ARP as none of these patients developed definite changes of CP over the duration of disease and follow-up. This study
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Hepatorenal Syndrome Carries the Highest Risk of In-Hospital Mortality Among Hospitalized Patients With Primary Biliary Cholangitis

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INTRODUCTION: Primary biliary cholangitis (PBC) is an autoimmune and progressive cholestatic liver disease with significant morbidity and mortality. Hospitals with safety-net burden (SNB) provide an essential role to serving low-income and historically vulnerable populations. We aim to evaluate factors, including hospital SNB, associated with in-hospital mortality among hospitalizations with PBC.

METHODS: Using the 2012–2014 National Inpatient Sample, we evaluated US adult hospitals with PBC (using ICD-9 codes). Hospital SNB was defined as the percentage of hospitalizations with PBC. We included adult patients with PBC with Medicaid or uninsured payer status per hospital, and was categorized into two groups: no SNB vs. any SNB. Between-group comparisons used chi-squared testing. Survey-weighted, adjusted multivariate logistic regression analysis was used to evaluate factors associated with in-hospital mortality.

RESULTS: Among 7,364 hospitalizations with PBC (mean age 64.0 ± 14.3y, 16.1% men, 70.3% non-Hispanic White, 65.8% were in no SNB and 34.2% were in low-high SNB hospitals. Crude in-hospital mortality was 4.1%, with significant differences by hospital SNB. On adjusted regression, among the cirrhosis-related complications analyzed, the presence of ascites (OR 1.85, 95% CI 1.36–2.52, P < 0.001), hepatic encephalopathy (OR 2.32, 95% CI 1.75–3.00, P < 0.001) and hepatorenal syndrome (OR 7.58, 95% CI 5.12–11.12, P < 0.001) resulted in higher odds of in-hospital mortality compared to those without the respective complication present. Additionally, hospitalizations at urban teaching hospitals also had a higher odds of in-hospital mortality compared to rural hospitals (OR 2.94, 95% CI 2.10–4.46, P < 0.001).

CONCLUSION: Hospitalizations with PBC with concomitant cirrhosis-related complications had significantly higher odds of in-hospital mortality. Specifically, PBC hospitalizations with hepatorenal syndrome were 7.6 times more likely to die during hospitalization. Urban teaching hospitals also had higher in-hospital mortality compared to rural hospitals.

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Post-ERCP Pancreatitis Rates and NSAID Use in a Community Hospital

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INTRODUCTION: Endoscopic retrograde cholangiopancreatography (ERCP) has been consistently used for more than 50 years as a diagnostic and therapeutic procedure in pancreatobiliary diseases. However, its use is associated with several adverse effects including bleeding, cholangitis, pancreatitis, intestinal perforation, and death. Of these, post-ERCP pancreatitis (PEP) is the leading cause of morbidity and mortality with an estimated incidence of 1.6–1.5%. Endoscopic techniques, patient characteristics, and the hospital setting have been noted to put patients at higher risk of developing PEP. Williams et al. reported a significantly increased risk of PEP in community hospitals compared to university hospitals. Racial NSAIDs, including diclofenac and indomethacin, have shown promising results in several high-quality clinical trials and meta-analysis, especially in high-risk patients. More recent trials failed to show a significant reduction of PEP after NSAID use. There is scant data on the efficacy of rectal NSAIDs in higher risk patients in community hospitals. The aim of this study is to determine if there is an increased risk of PEP in a community hospital and if the use of rectal NSAIDs for high-risk patients is beneficial within a community hospital.

METHODS: After obtaining IRB approval, the charts of every adult patient admitted to a Wichita, KS community hospital for ERCP in a 2-year time period were reviewed. Primary endpoint was percentage of patients developing PEP. Secondary endpoints included NSAID use in high-risk individuals (Table 1) and the change in incidence of PEP in this group with the use of rectal NSAID.

RESULTS: 422 patients underwent ERCP during the study period. Of those, about 212 (50.2%) were noted to have at least 1 high risk factor to develop PEP. 243 (58.2%) of the patients received rectal NSAIDs, of which 10 patients were noted to be high risk for PEP. 9 patients (2.1%) developed PEP during the study time period. Of the nine patients, 5 patients were high risk and did not receive any NSAIDs. The use of NSAIDs did not cause a significant reduction in PEP in the high-risk group (p = 0.7) or overall (p = 0.66).

CONCLUSION: PEP rates in a community hospital setting have not been well established. Our study reports an incidence of 2.1%, comparable to the PEP incidence described in academic trials. Despite the unstandardized use of rectal NSAIDs noted in the study population, there appears to be no significant benefit in their use overall in the high-risk population.

What Is the Impact of a Delayed Presentation on Outpatients With Post-ERCP Pancreatitis? An Analysis of Clinical Predictors and Outcomes

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INTRODUCTION: Post-ERCP pancreatitis (PEP) occurs in up to 15% of high-risk patients. Symptoms after ERCP are common and usually determine admission. However, discharge of outpatients at risk for PEP is frequent after ERCP. In retrospective studies, discharged PEP patients are at increased risk for severity, possibly due to delays in IV fluid therapy. The aim of this study is to evaluate clinical predictors and outcomes in patients discharged and later admitted with delayed presentation of PEP.

METHODS: We identified consecutive outpatients with PEP enrolled in a prospective study designed to evaluate the optimal rectal Indomethacin dose for prevention of PEP in high-risk patients. All patients received Indomethacin and were observed for at least 4 hours post-ERCP per protocol. All clinical data except IV fluids, recovery medications, and pain scores were collected prospectively. Diagnosis and severity of PEP was defined by Cotman criteria.

RESULTS: 107/720 (14.9%) developed PEP. 135/720 (18.8%) were directly admitted after ERCP. While the admission rate in patients that developed PEP was higher (P < 0.001), 58/107 (54.2%) were discharged and had a delayed presentation of PEP. Median time to presentation was 24 hours (IQR 11.5–37.5h). Discharged patients were older (age 47 ± 11 y, P = 0.02), more often had a morning procedure (39.2% vs 39.7%, P = 0.78), less often had pancreatic stent placement (28.6% vs 95.9%, P = 0.001), spent less time in recovery (26 ± 32 minutes, P = 0.084), required less IV fluids (46 vs 173 MME, P = 0.001) and had lower pain scores (28 ± 6.5, P = 0.001) (Table 1). On multivariable analysis,